

XTAL

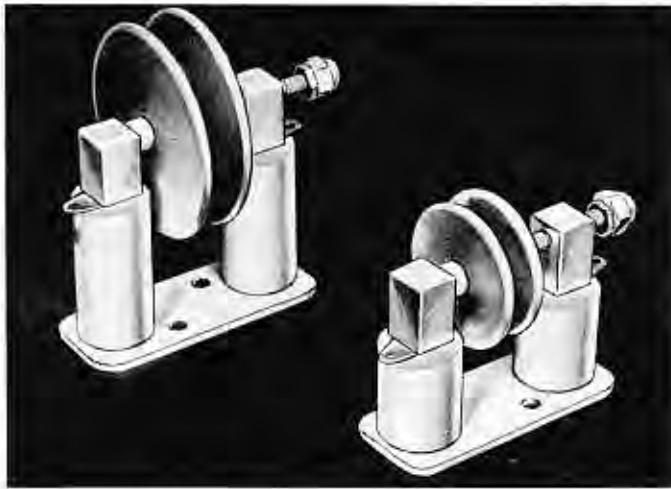
NOV.-DEC.
1947
Vol. 9 No. 11-12

for the
radio
amateur



OFFICIAL JOURNAL
THE CANADIAN AMATEUR RADIO CONSTRUCTORS' ASSOCIATION
TORONTO, ONTARIO





8403

8401

DISC TYPE NEUTRALIZING CONDENSORS

8403 mmfds	8401	Spacing	Peak Volts
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4.7	3.1	.250	12000
3.1	2.3	.500	15000
2.2	1.9	.750	18000

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HERE IT IS—THE NEW NC-57



The SM-57 Signal Strength Meter has been designed as an accessory to be used in conjunction with the NC-57.



INTERIOR OF NC-57



To meet the needs of the many hams who have asked for a sensitive, first-rate bandswitching receiver in the lower price bracket, complete with speaker and power supply in one cabinet, the National Company has developed the brand-new NC-57.

The CW operator will enjoy the stable operation and excellent signal-to-noise ratio of the NC-57. The phone operator will be pleased with the tone quality and selectivity.

The SWL will log DX stations with ease and clarity. In fact, any operator now operating a communications receiver will find the NC-57 essential as a standby. In this price class, the new National NC-57 is an outstanding value. See and hear one at your local distributor's ham shack this week.

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Dept. No. 16
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HAVE A HEART!

Overworked power-supply rectifier tubes may be trying to send you that message!



GENERAL ELECTRIC ELECTRONIC TUBES

■ Checked your rig's power supply recently? A capacity that was adequate when you first went on the air, may not "fill the bill" today.

New, more powerful postwar transmitting tubes you're using, other steps to modernize your rig on the r-f end—these may overstrain a rectifier tube or pair of tubes that simply isn't up to handling the increased load.

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First, figure the total current needed by the tube or tubes to which you are supplying power. *Second*, add to this the current required by

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If this is under 250 ma, and your d-c voltage needs are no greater than 1,600 v, a pair of GL-816's is your logical choice. Current requirements above 250 ma, or a d-c voltage exceeding 1,600 v, call for two GL-866-A's. (Please bear in mind that the tube ratings given at right are maximum—i.e., by operating either type at a lower current, it does not follow that the voltage can be raised above the max figure, or vice versa.)

Prices and further information gladly will be furnished by your G-E tube jobber.

TYPE GL-816

A pair of these mercury-vapor rectifier tubes delivers 250 ma d-c current (max) at 1,600 v (max), handling up to 350 w transmitter input.

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R-1147

CANADIAN GENERAL ELECTRIC CO LTD
HEAD OFFICE — TORONTO



XTAL

[C R Y S T A L]

VOL. IX
NOV.—DEC.

1947
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Owing to printing and production difficulties we find it necessary and expedient to combine the November and December issues in an effort to catch up.

CAROA

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Authorized as second class mail,
Post Office Department, Ottawa.



Season's Greetings FROM THE GANG AT HQ.

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... Food Parcels . . .

WHAT has food got to do with amateur radio? We might as well ask what clothes and a shack have to do with our hobby. The answer is that without these things there can be no ham radio.

Mr. John Strachey, the Minister of Food in Great Britain, recently stated that the number of calories per day deemed necessary for unemployed men before the war was 2,330. The diet procurable today is supposed to give everyone 1,700 calories, but Mr. Strachey has said that few people actually get that amount, and that the government is extremely worried about the food position.

This means quite bluntly that our G friends are living below starvation level, and our authority is none other than the Minister of Food himself. When we read that pugilists in Canada and U.S.A. are required to have 7,000 calories, it makes us realise that our kinsfolk must be having a very literal thin time.

There is not the slightest doubt that Canadian amateurs will rise as a man to help, and you Ve's will be delighted to know that arrangements are already in hand to handle this vital question from headquarters CAROA to headquarters R.S.G.B. We will be working hand in hand with John Clarricots (G6CL) the secretary who already has a system

operating for the fair distribution of all parcels to transmitting and non-transmitting members of R.S.G.B. alike. A continuous method of drawing names of members out of a hat is in process. Thus the possibility of the most active and QRO G's getting the most parcels is avoided.

The W.I.A. (Australia), N.Z.A.R.T. (New Zealand), and S.A.R.R.I. (South Africa) are already sending parcels to R.S.G.B. for distribution in this manner and the system is working really well, although it means a lot of extra work for headquarters staff in London. This they cheerfully give and will continue to give, even if you overload them with good things.

Already the Southern Ontario 75 meter networks have got wind of this and they are showing the most lively interest and enthusiasm, and in order that this may be centralized and thereby reduce postage, will you please send cash or goods direct to CAROA headquarters and we will undertake to parcel these items and send them to R.S.G.B.

"Give, and it shall be given unto you; . . . For with the same measure that ye mete withal it shall be measured to you again." (Luke 6: 38.)

H.A.M. Whyte, Ve3BWY, ex G6WY.

Line of Sight

R. G. Coleman, VE3ANY*

IT has been said that frequencies above 50 megacycles are useful for the line-of-sight communication only. Perhaps this statement will have to be corrected to mean frequencies above 150 Mc, since it is well known that contacts on 6 and 2 meters are regularly made at distances beyond the horizon. Also, VHF communication over short distances is possible under conditions where there can be no line-of-sight, such as through buildings and hills. Since most contacts of this nature take advantage of unpredictable reflections and cannot be duplicated for all locations, it has been stated that reliable communication is restricted to the "optical horizon," and only when bending or reflection of some sort is present can this distance be increased. Therefore, it is felt that the publishing of some data on horizon distance will be useful and may answer some questions regarding one's ability to work overland dx. This data can be found in every good textbook on radio, but since it may not have occurred to many to give it more than passing glance, we are repeating it here.

Several authorities are in agreement about the antenna location for the best results. It is said that it is necessary to have a clear area of from 500 to 1000 feet about the antenna, with no large objects at a height greater than antenna. Further, it is stated that at a distance of not less than two miles no structure or other obstruction should project more than two degrees above the line of sight. The dweller in the centre of a large city has a small chance of meeting the above conditions, but since most ham stations are in homes in residential areas with nothing taller than a three-storey building for several blocks, the fulfilment of the "ideal" condition comes within the scope of most of us. One need only erect his antenna above the rooftops and it will command a clear view for more than 1000 feet. If the dwelling is far enough from the centre of the city, the tall buildings are likely to be less than 2° above his line of sight. Now, having established the "perfect" location, what is the maximum distance of transmission along the line of sight? In other words, what is his optical horizon? The optical horizon depends primarily on the height of the antenna related to the surface of the earth. At sea level the optical surface of the earth can be considered the sea. Inland, one must use the nearest large body of water as a starting

point in his calculations. But let us not complicate things so soon! Forget that there is any elevation other than the height of your antenna. Refer to Fig. 1. We see that the distance along the surface of the earth to

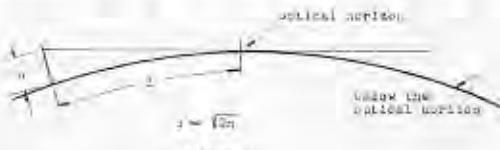


FIGURE 1.

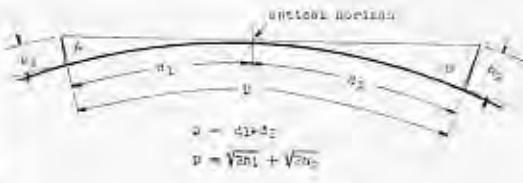


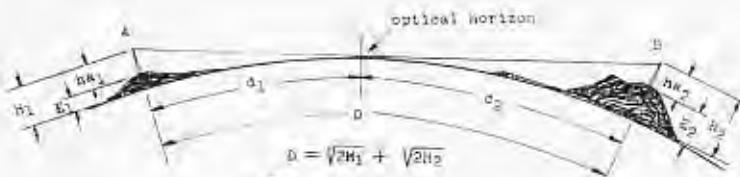
FIGURE 2.

the optical horizon is given by the formula $D = \sqrt{2}h$. Therefore if our antenna is 50 feet high our optical horizon is $\sqrt{2} \times 50 = \sqrt{100}$ which equals 10 miles.

However, this does not take into account the fact that the antenna at the receiving end may also have some height, so another calculation must be made after ascertaining the height of the antenna at the other end. Referring to Fig. 2, we see that $D = \sqrt{2}h_1 + \sqrt{2}h_2$. If the antenna at "A" is our previous one and the antenna at "B" is the receiving antenna at the other station, and if h_1 is 50 feet and h_2 is 32 feet, it follows that $D = \sqrt{2} \times 50 + \sqrt{2} \times 32 = 10 + 8 = 18$ miles. As is often the case, however, the two antennae are not on ground of the same level or elevation. It is now that some means of finding the elevations of the various stations becomes imperative.

One method is to use the excellent topographical maps published by the Department of National Defense, Geographical Section. These maps which are on a scale of 1" equals 1 mile, cover a section of country approximately 18 by 26 miles, and may be obtained from the Surveyor-General, Dept. of Mines and Resources, Ottawa, at a price of 25 cents. Six or so may be obtained, which will usually cover any area which may be within range of VHF equipment. Elevations, topography of

*VHF Editor XTAL.



$$D = \sqrt{2h_1} + \sqrt{2h_2}$$

$$\sqrt{2h_2} = D - \sqrt{2h_1}$$

$$h_2 = (D - \sqrt{2h_1})^2$$

$$h_2 = \frac{(D - \sqrt{2h_1})^2}{2}$$

Fig. 7

the land, main and secondary roads and even individual houses and barns are shown, and it becomes very easy to locate any point and ascertain its altitude. So now, having found a means of accurate measurement, let us take a real case of two stations wishing to establish contact with each other. Refer to Fig. 3. Station "A" wishes to contact station "B". Referring to the maps, we find that station "A" has an altitude of 280 feet, station "B" has an altitude of 300 feet and the distance between them is 38 miles. The altitude of the nearest lake is 240 feet. (Altitude is reckoned from sea level and is taken from the map. Elevation is based on the reference level, which in this case is the lake.) It follows then that station "A" has an elevation of 40 feet and station "B" has an elevation of 300 feet. If the antenna height at station "A" is 32 feet, what will the height of the antenna at station "B" have to be, to fulfill line-of-sight conditions? In Fig. 3 E_1 is 40 feet, E_2 is 300 feet, h_A is 32 feet and D is 36 miles. Therefore $H_1 = E_1 - h_A = 40 + 32 = 72$ feet. Solving for H_2 (the elevation to the centre of "B" antenna) we get $H_2 = \frac{(D - \sqrt{2h_1})^2}{2}$ which

gives $H_2 = \frac{(38 - \sqrt{144})^2}{2}$ which equals

$\frac{(38 - 12)^2}{2} = \frac{676}{2} = 338$ feet, if E_1 is 300 feet

then h_A (the actual height of the antenna at "B") is $338 - 300$ which is 38 feet. Simple, isn't it? Now let's see you do it for your location to any other location!

There may be some who argue that this formula is wrong, but I would like to point out again that it does not take into account any inversion bending or other "freak" conditions which may exist. Bending is nearly always present in some degree or other and that would account for part of the reason why the distance "D" may seem short. Another factor worth mentioning is that the formulae are for a relative signal strength equivalent to a good "S9" signal, and of course contact can be made with lesser signal strengths than this. However, we feel that it is fairly ac-

curate for consistent 100% QSO conditions. Anyway, it will give you something to do on those long winter evenings when the only QSOs are local and you are dreaming of Spring and such things as new antennae and summertime "E" layer skip dx,

QVE



Important Message To All Ve Amateurs

The question of the division of our frequency bands between CW and telephony is one which merits the serious consideration of all amateurs. In order that the wishes of the Canadian amateurs on this subject be made known to the authorities at Ottawa, it is requested that each and every one of you advise me—preferably by postal card—of your views. After allowing sufficient time for this canvass to be completed, the results will be tabulated and forwarded to the Controller of Radio, Department of Transport, for his consideration before issuing our 1948-9 licenses.

ALEX. REID,
Canadian General Manager,
A R R L,
240 Logan Street,
St. Lambert, Que.

C A R O A CLUB ACTIVITIES

THE executives of the various national radio organisations throughout the world have long looked upon the Amateur Radio Club with a kindly respect. CAROA shares these views, and is most happy to have affiliations with groups across Canada. We know that to add to the strength and unity of amateur radio, improve understanding and co-operation, to promote technical discussions, to solve local interference problems, and to quell "bootleg" or illegal operation, there is nothing like an amateur radio club on the job. Organized radio clubs can be quite influential, locally, and can be of great assistance to a community in time of emergency. We feel that through those co-operation and association with clubs, CAROA and amateur radio as a whole, can benefit.

The executive of CAROA have recently discussed the Club question at some length and we feel that, in the past, we may have neglected the Clubs inadvertently. It was decided that we should have a Club Secretary, and that a Column should be devoted exclusively to amateur radio clubs; a page where announcements could be made, hamfests and picnics reported, individual Club activities publicized, and where readers will know where to look for such news. Various other magazines report club activities, but we believe that this is the first time that a page has been devoted exclusively to Clubs.

So, here you are, Amateur Radio Clubs, it's your page.

The success of this venture will depend to a great extent on the Clubs themselves. If news is not forthcoming the page will be small. If news is not interesting, the page will be dull. If news is too lengthy, we will have to shorten it, and it may lose some of its importance. Give us lots of interesting news, briefly, and we will do our best.

The final form which this column will take is largely dependent on the criticism we receive. Let us know when we displease you, so that we can alter our copy until everyone is satisfied. The deadline date is the 10th of the month preceding issue date of XTAL, and the column will be held open until that date for important announcements.

The first things we would like to know, for our records, are:—the names and addresses of your club executive—to whom in your club should we address correspondence?—what committees have been formed and what are their functions?—what are the dates and times of your meetings?, and lastly, when was your club formed and what is its history? These

items are for the record. For this column, your monthly activities are the important items. We should not be too interested in the activities of your individual members, as you no doubt send those reports to the various station activities managers.

News this month must of necessity be brief. Clubs near headquarters will be visited by a representative of CAROA. It is hoped that this "good-will" tour will offer the chance to provide answers to the many questions regarding CAROA and XTAL that we know are in the minds of amateurs. We sincerely regret that we are financially unable, at present, to visit Clubs across Canada, but any questions directed to this column will receive an honest answer.

The Montreal Amateur Radio Club took the editorial, "Food for G's", in September XTAL, quite seriously and an impromptu collection resulted in \$31.00 which provided seven 7-pound food parcels for shipment overseas. A very fine gesture, M.A.R.C., and compliments for your thoughtfulness!

The West Side Radio Club was recently host to VE3KM, VE3BGT and VE3BMG, the President of the Hamilton Amateur Radio Club. VE3KM is emergency coordinator for the Toronto-Hamilton area and gave a very fine talk on the Emergency Corps and at the conclusion appointed VE3AIB as Assistant Emergency Coordinator for Toronto. VE3BGT gave a fine description of his conversion of the SCR 522.

The VHF division of the Frontier Radio Association, of Windsor, Ont., met on October 17th at VE3AHL to discuss points of interest regarding VHF in Windsor. After much general discussion on War Surplus equipment the subject of antennas came up. The general feeling was toward standardization of horizontal polarization, due mainly to the mechanical ease of construction and reduction of ignition noise. More groups like this should get together, as standardization of equipment is a definite step forward.

The Toronto Amateur Radio Club is running a contest for its SWL members, and as a prize for the first to get his ticket, the club will pay his examination fee and his station license for the first year. In keeping with their publicity campaign, two of their club members are giving talks to local men's clubs.

That's all the news for this month. It is hoped that next month will tell a different story. So, to all Amateur Radio Clubs, MERRY CHRISTMAS!

VHF IN CANADA

Conducted by GORDON COLEMAN, VE3ANY

DX RECORDS

- 50-54 Mc Ve7VY (Vancouver, B.C.) — W2PWP (Delanco, N.J.), 2500 miles—July 27th, 1947.
144-148 Mc Ve1QZ (Halifax, N.S.) — W1OSQ (Milford, CONN.) 500 miles—August 27th 1947.
235-240 Mc Ve3BNG (Waterdown, ONT.) — Ve3AEZ (Hamilton, Ont.) 15 15 miles—May 18th 1947.
420-430 Mc Ve3AND (Hamilton, Ont.) — Ve3BFF (Hamilton, Ont.) 1-4/5 miles—May 15th 1947.

PROBABLY the best Christmas present any VHFer in Canada could wish for would be to work a ZS or an LU on 50 Mc. By the time this gets into print, someone will most certainly have done just that! We never thought that we would hear of a Ve3 working a G on 6 meters, but it has happened! On October 30th at 8.30 a.m., E.S.T. Ve3BQF in Hamilton, Ont., was listening to G5BY on ten meters telling W1HDQ that his, and several other W signals were being heard on 50 Mc. On one of G5BY's standbys to monitor six, Ve3BQF decided to take a chance, but not having his rig fitted for CW, he called on phone. At 9.03 a.m. G5BY answered his call, and a fb qso ensued until 9.17 a.m. However, Ve3BGF is not the only Ve to work G5BY, even though he was the first and the furthest inland. Ve2KH, Montreal, Que., and Ve1QZ, Halifax, N.S., have also worked G5BY crossband, on Nov. 2nd. Ve3BQFs qso was just over 3100 miles, and although he holds the Canadian record for being heard at the greatest distance, he can not qualify for the "DX Records" section of this column, since the contact was crossband, 6 to 10. G5BY worked over 75 North American stations in the week of Nov. 1st. This excellent work is not without its reward, as the G.P.O. (which governs radio as our Dept. of Transport does) has authorized several British stations to operate on 50 Mcs until the end of December, in order to take full advantage of the present M.U.F. conditions. The thanks of all radio amateur stations in Canada is expressed to the G.P.O. for this fine co-operative action.

The months of September and October produced some good Aurora DX conditions and openings to Ve3 were as follows:

- Sept. 13—2300-2330 hrs.—W2's—weak.
Sept. 24—1900-2200 hrs.—W1, W2—fairly strong.
Sept. 30—1900-2000 hrs.—W1, W2, W8—strong.

Oct. 1—2115-2145 hrs.—W1, W2, W3—fair
Oct. 3—1900-1930 hrs.—W1, W2—very strong.

There were also two very good sporadic E openings to the Ve3 district during Sept. and Oct.:

- Sept. 29—1900-2000 hrs.—W6 (far west)
Oct. 23—2300-2330 hrs.—W4.

An extraordinary F2 opening, with double hop dx occurred on Nov. 1st from 1200 to 1500 hrs. The six meter band was alive with stations up to 51.5 Mcs. Heard and worked by some Ve3s were W6s (5) W7s (6) W8DAI, VE7DU, KL7VY in Alaska!

News of some very good VHF activity in Quebec city has been recently reported to us. Using the "B" set of the No. 19 Set, the following are on 235 Mcs:—Ve2VO, Ve2PL, Ve2OF, Ve2QN, Ve2FJ, and Ve2HB. The Army might be interested to know that they are working 10 miles regularly, with quite ordinary antennas. Active in Quebec City on 144 Mcs are—Ve2NK, Ve2LA, Ve2ZL, Ve2TJ, and Ve2VP.

An active 6 meter group has sprung up around Belleville Ontario, with the following stations active:—Ve3ADJ and Ve3ABG, Belleville, Ve3ASB, Trenton, Ve3BQL, Picton and stations coming on in Brighton, Stirling and Deseronto.

The VHF group of the Frontier Radio Club in Windsor, Ont. are quite active on 144 Mcs. They are using mostly SCR 522's and are horizontally polarized. Results during the temperature inversion peak, Oct. 13th and Oct. 14th were as follows:—Ve3BHE worked 7 stations in Pennsylvania, 3 in western Michigan, and one in New York state. Ve3AHL worked 3 Ohio stations on Oct. 13th, and on Oct. 14th, 6 in Ohio, 2 in Penna., 2 in New York state. Ve3AVI worked two in Penna. Active on 144 Mcs in the Motor City are:—Ve3BHE, Ve3AVI, Ve3BQC, Ve3BOL, Ve3BIW, Ve3ADN and Ve3AHL. Nice going boys, keeps it up!

Active on 6 meters in Brandon, Manitoba are Ve4YW, Ve4AU, Ve4HD, Ve4IF.

The 144 Mc gang in Toronto is active every night from sundown on. Antennas are mostly horizontal beams. Regular skeds are kept with W2HNN and W2RJH. There are about 10 Toronto district stations active now on 144-148 Mcs.

Well fellows, that about does it for this month. Won't you please try to send in more dope on your VHF activities? Let's make those low frequency boys sit up and take notice!

MERRY CHRISTMAS, VHF'ers.

C A R O A NATIONAL REPORT

Ve2

Floyd G. Gribben, Ve2XR, 5120 Westbury Ave., Montreal, P.Q. 5387. Well, here we are again with another monthly report and I would like to take this opportunity to thank all those that made this report possible by providing me with the news. WY doing well with his RK-39 on 28 Mc tone and is proud of his ST2 contact. He's on the beam of course! BR is swinging the S meters again on ten tone after summer layoff. QV with his 815 and new beam doing well on ten meter tone DX. QS returned to town with rig from summer hideout and plans new exciter. IS kept up nights by new baby dotter and not dx. WK still looking for hard one to make his 20 meter CW WAC—Asia! Who isn't? OG snagged a VU on 28 Mc tone. AAL new Montreal ham with 807 final and SX-42 recvr. BV moved from Montreal to St. Rose and a nice dx spot. LY was in Montreal on his way thru from B.C. to N.S. with Navy. NR in building with new NC-173 recvr. HI finds time for 20 meter CW dx but sees nothing like pre-war on 40. TM does lot of talking on 20 and 75 tone from Quebec. AX has dandy telephone pole on front lawn for his new beam antenna and the Hampstead dogs! JJ failed to make WAC on ten tone in one day after he did hear JT, JG and CJ. PK adds five more countries to his list on 28 Mc tone. XR finally got QSL from GEZO for 7 Mc contact with 25 watts to DL6. GJ has five watts on 30 CW while rebuilding. RE the CGM for A.R.R.L. gave very interesting dope at September Montreal Amateur Radio Club meeting on doings at Atlantic City confab. Stressed Canada and U.S. only countries fully recognizing amateurs. Said we should be very proud of the support given us by our government thru the Department of Transport under Mr. G. C. Browne. We will lose all of 160 and 70 Mc on the high end of 20. Because of these losses we hear many bitter voices in our ranks but we are mighty lucky when we consider that the Ve and the W hams came out of the conference with more frequencies than any other countries. Think it over OMAs. YV squirts it out with new rig. VS left 80 CW to take a whirl at ten tone with a new rig. VL has brand new QST VFO. HE has fun with flea power on 75 tone while big super rig under way.

Beef Dept.—Why is it so many come back with the dit-dah-dit, dit-dah-dit (which of course means all reed OK) then go on to repeat everything that you sent by giving out with the familiar "OK on this, and OK on that" business. You can still comment without repeating and it saves a hang of a lot of time and effort. Try it! XX plays with 20 and 75 tone and has rattling good choke in power supply. The Montreal Amateur Radio Club will be electing a new slate of officers for 1948 so be at the December meeting. OM, GM finally got up his first post-war antenna so we should hear his CW signs soon. HI, HI Dept.—One of the M.A.R.C. boys won an \$14 at the September club meeting. While he and his rats were snacking it out at a local "little vendors" some one spied the bottle and lifted it. Later it was returned to its resting place unnoticed. What the owner would like to know is, who added the sugar cubes and the dill pickle to the contents of the carton?? Well, fellas, that closes the column for this month but wouldn't you like to see your call in print too? Drop me a card or call me on the tone or the site (1130, 3527) and let me know what's doing over your way and I'll be glad to put the dope in the next report. —Oct— GM finally got on the air for the first time postwar and is banging it out from Longueuil with 19 watts to a 6L6 final and receiving 'em with a Marconi SMR-3A. All on CW. TH holding down house with new beam and is reported to have cleaned 75 tone sig to compete with CJAD. PY bangs it out on 20 CW. AAV is new ham on 30 CW. HQ plays with 40 and 80 CW from Carterville. WY worked first ZL Nov. 2 with 35 watts on ten tone. WK got first VK QSL but still wants Asia for WAC. BI recovering AR-6 receiver. All the gang wish BV rapid recovery from operation. Our Ethel, HI, says she's one of original CAROA members. Her brother studying for ticket. DU expected back on with new set-up. ABL new Montreal ham from Ve4 and will be on when he solves apartment antenna problem. LU makes habit of working VK and ZL after supper on ten tone. HG gets 'em before breakfast on 28 Mc tone. Montreal Amateur Radio

Club planning ARRL convention in Montreal in October, 1948. PK worked his first VK on ten tone, HR having been trouble. Fears it won't stand the elements. Guess it's 4 element job. Spring, summer, autumn and winter! WF made WAC on ten tone by working VK. All with 25 watts to 807. JJ claims he's first in these parts to work ZL crossband. He was on 11 meters and ZLBN on 10 and contacts not rare/unusual. Any challengers? Like a swell pair of light tones cheap? Investigate U.S. Army surplus type HS-30-U. Available in Montreal. Montreal Amateur Radio Club asked BE, our ARRL CGM, to apply to Dept. of Transport for NFM operation by Ve amateurs. FK got fed up with 20 tone QRM and moved his 833-A final to 10. VL souped up his SX-2s receiver. GE has new operating desk. DL finally got a received—an AR-77. Montreal Amateur Radio Club adopted a plan to send food parcels to G amateurs. CO suggested passing hat. Over \$30 collected for first contribution to this worthy cause.

Many of you have real final report in November QST on Atlantic City Conference. We lost 160 meters, it is true, but all of us knew we would before the Atlantic City sessions began. All we lost that wasn't expected was 50 Mc on 20. When we consider the skimpy bands left for ham of many other countries, we certainly did better than most of us expected. All because of the wonderful support given us by the ARRL and the governments of U.S. and Canada. The airport given the amateurs at Atlantic City can best be illustrated by quoting from November QST, page 36, last paragraph, left column—"Canada was as splendid a hacker as ever an amateur could pray for". Individual amateurs and clubs would do well in expressing their gratitude to those who devoted their untiring efforts to our cause at Atlantic City. We salute Mr. A. Reid, Ve2BE, our CGM, Mr. G. C. Browne, Controller of Radio, Dept. of Transport, and Mr. T. A. Stone, of our Dept. of State, who was chairman of the Canadian delegation. Well, men, that closes the column for this month. Hope your and yours had a fine Xmas. The best for you all in 1948. 73 Floyd,

Ve5

Bill Gordon, Ve5MW, Ox Bow, Sask.—The Moose Jaw gongs are getting busy again. They held a club meeting at Ve5OM's with about 14 present. TLV is getting put used on 20 meters and seems to be working plenty of dx. 50M is one fone, most of the time and in his spare time is busy putting up a beam. 5OP brought back a National 173 from the States. His wife has been in the hospital undergoing an operation but is doing fine now. Hope you get well quick. Mrs. 5OP, Fred, by the way, is our QSL Manager, and writes us that he is still not getting enough envelopes in for these cards, so better get 'em in there. SSY (our ex-SCM) was heard over CHAI in a street interview program. Just goes to show you that you can't keep that guy away from radio in any form. Art see he has more time at home now, therefore more operating. Art complains of BCs (as who doesn't!) is on 28 Mc tone with 100 watts to TZ40 final and an RB15 Patterson receiver. His eye is open for an NC-173. He must have visited 5OP. 5RB is still banging his 8 watts all over the country on 75. 5MW has been working quite a bit of dx on 20. 5GA had speech amplifier trouble. So he got busy and rigged up a carbon mike into his AT5. Carbon mike or no carbon mike it still sounded like "ole Bill." 5MZ is on 29 CW. 5BT is QRT for seasons of his own. 5RJ is on 80 CW running 35 watts to an 807. 5GU is on 75 and 20 tone. 5AS at Lloydminster is on 20 tone and worked 5MW on a lit short skip. Yours truly dropped in on 5ES at Weyburn and caught him just going out hunting. What we wonder is just how Reg. made out. Whether he returned with nothing and big story or with an armful of ducks and no story? 5GA has winterized his antenna and Bill has been doing FB on 20. He has a war surplus marine frequency meter. 5PA is all hot and bothered about ten meters and is trying to get something to work on that band. Dig 'em out kid! 5RV and 5CE are going at it every night on 75. Stan has a new VFO which he likes to play with. 5MW is back on 75 after hibernating on 20 all summer. 5RD has disappeared from 75 again. Ten must be open!

QSY to page 12



DX'ers of THE MONTH

Ve4RO
82
Countries!

Call	Oct.	PW
Ve4RO	82	144
Ve7HC	64	124
Ve2WW	38	39
Ve3BBZ	36	50
Ve7EH	34	72
Ve6AO	30	64
Ve3IR	22	23
Ve3AJS	21	45
Ve3BLY	21	26
Ve1EA	17	107
Ve3RW	17	30
Ve4RP	16	49



Ve4RO still on top! . . . Third straight month! . . . Swell letters from the gang listed. . . . All suggestions will be of great help when the column is expanded. . . . Which will be soon, . . . Ve2WW is newcomer with 4D32 in final . . . has been on only 4 weeks! . . . newcomer to DXers of The Month, that is . . . Ve6AO complains about a dx blackout in Calgary from Oct. 9 to the 21. . . . Ve3BLY tells us that he and 3AJS along with 3RW are having a little dx contest of their own in XTAL. . . . Ve1EA worked 54 in 3 mornings! ! . . . comes up with his usual interesting report on 3.5 Mc dx in Oct. . . . it goes like this: worked GD3UB . . . Heard: F8OG, F8TM, F8CJ, PAoZY, GM4MF, PAoPA, G5LI, FA8BG (Africa), LB4QA (whaler N25 deg., W20 deg., south of Canary Is.). Heard on 50 megacycles! — W7BQX, W7DYD, W6IV, W6AOR, W6EUL, W6AO, W6AMD, W6BH, W6OVK, W6BHR, G6X, PAoUN, G6Y, G6DH, G5BD, G4X. . . . He says he must get a 6 meter job going! . . . Nice going Clarry! . . . Ve3RW worked WAC in Sept!

October Prefixes

Ve4RO—KZ5, ZL, VK, CM, LA, G, UA1, ZS, VO, XE, PY, OA, LU, RA (Franz Joseph Land), OX, UB, D, OH, OK, YR, GW, HB, OZ, F, GM, KH6, KL7, J, KP4, I, EI, PA, ON, YV, CE, CN, GI, U9, HK, UR, UQ, SM, VP4, KG, UD, HA, ZE1, KX6, HC, KV4, CX, TI, CR7, NY4, VP6, VP3, YI, PZ, KS4, VP5, HP, VU, C7, EP, HZ, CR4, VQ2, 16, KA1, PK6, VP9, UH, UG, FA8, ZD3, YU, ET, CT1, ZD4, YN, UC, GC. . . . Ve7HC—VP4, VK, ZL, KL7, UH8, OA, KH6, J, VS4, VO, OX, GI, G, ON, PAo, I, OH, HA, CN8, UB5, UG6, OZ, GM, ZS, XZ, VS2, HB9, ZC6, EP, UD6, EP, UD6, YR, YU, FA, UR2, GD, VU, UI8, PY, VP8, F8, D, GW, EI, KG6, KA1, PK6, C, UAO, KV4, OK, VS6, CT1, YA, KP4, TF, XE. . . . Ve2WW—GO2, OK, ZS1, VK, VK7, F9, OH, ON4, LA, PAo, PZ, KP4, KZ5, HH, ZL, KV4, HC, NY4, LU, J2, VP5, GM, KL7, KG6, VO, GI, EI, CM, GW, I, SM, UA3, YV, XE, TG. . . . Ve3BBZ—HK3, XE1, GM, I, OZ, CO, ZL, VP6, VK2, F8, G, PAo, OX, SM, OA,

HC, CX, CE, PY, LU, ZS, ZE, VO, VP9, ZD, VP4, TG, GW, NY, VP3, ON, GD, D4, YV, GI, TI. . . . Ve7EH—C, CE, CM, D, EI, ET, F, G, GI, HB, HK, I, J, KG6, KH6, KL7, KS4, KZ5, LA, LU, OA, OH, OK, ON, OZ, PA, UA6, VK, VO, XE, YR, ZL, ZS. . . . Ve6AO—KZ, UA1, CE3, XE2, KL7, UA9, VS6, SM, ON, HB, G, OK, KH, J4, OZ, KA1, OH, RAEM/MM, VK, UQ2, EI, VP9, ZL, VO6, II, F, KG, VE, W. . . . Ve3IR—W, VE, J3, FA8, OK, PZ1, I, SM, G, F, GW, PAo, O, KZ5, OX, OA, GI, VK, KP4, VP4, CNS, GM. . . . Ve3AJS—D4, ZS5, G3, F8, PAo, GW, GM, XE, LU, OZ, VO, I, ON, PZ, CM, HC, SM, HB9, KZ, ZL, MD. . . . Ve3BLY—CO, G4, OZ, TG, KZ, CX, ZS, W8QOH/MM, W5BSY/MM, F8, HB, GM, I, PAo, EI, VO, XE, OK, SM, ON, GI. . . . Ve1EA—ET, W, MD5, KZ5, XE, EP, ZL, JS, VK (2, 3, 4, 5, 6, 7), G, VO, OH, F, HE, YU, D, GD. . . . Ve3RW—IA, HB, VO, PAo, OK, CT, OZ, F, VK, G, OX, PY7, GM, YV, TI, VP, GI. . . . Ve4RP—XE, F, D, SM, ON, G, J5, VK, YS, PK, OX, CN, K, CT.



What Do You Think?

WE HAVE been thinking about amateur radio magazines.

Contemporary publications serve a wide field. The technical side of our hobby is admirably covered—the traffic man finds much to read, dx reports are comprehensive as the universe, and VHF adherents are not forgotten.

Our first impression was that the field is so extensively and capably covered that any additional journalistic effort would be superfluous. Thinking about the need for or the true place of XTAL inspired our thoughts along this line.

And now we have some convictions. The first is that the interest the Canadian finds in XTAL contemporaries is a basic interest in the hobby generally. From cover to cover, those magazines are absorbing. They would be equally absorbing if, instead of living in England, we were domiciled in New York, London, Paris or Podunk. This would be true because of our affinity for amateur radio, and because those publications radiate hobby interest.

XTAL has nothing but the highest of praise for the publishers of amateur radio magazines. They are doing an admirable job and we hope they may go forward to ever greater success.

The field of our friendly contemporaries is not the field of XTAL. Competition is totally lacking. Not only is there room for both but there is NEED for both.

XTAL is not endeavouring to serve the amateur radio field in a general way. It is a little monthly magazine of, by and for Canadians. Its ambitions are not too pretentious, being limited to a desire to give Canadians what they want with a Canadian flavour.

Compared with our bigger brothers, we are distinctly provincial. XTAL field is peculiarly XTAL and to serve it well XTAL must be a chummy, gossipy sort of publication that tells Canadians about themselves, about CAROA, about their clubs and about the individual Canadian amateur.

QSY to page 12

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WHAT DO YOU THINK—from page 11

XTAL must reflect the intimacy of the family circle, the intimate friendliness of a personal letter. It must never attempt to pattern itself after any other magazine, for by so doing it will wander away from its true sphere and lose its true value.

Technical articles it will have, of course. But in a general way its content must always be decided on the basis of interest value to Canadians about themselves. Newsy items about VE stations, about matters being considered by CAROA Executive, about club activities across the country, friendly news about the family circle that every member of the family wants to read, should be our aim.

We are still thinking about amateur radio magazines. What do you think?

NATIONAL—from page 9

ing in swell signals on 75 from Parkside. 5WG has been heard on 75 quite early in the morning (the wee small hours) lately. Guess Walt must be walking that new junior operator. Congratulations, Walt! 5AP has rebuilt his modulator and has a new Bendix RA10DB receiver. 5KJ is QRL a bit for deer hunting. 5MW visited some of the fellows in MJ, Regina.

The following is somewhat of a record, we would say. 7US, 6WC, 5WG, 5AR, W6LBJ, WSPUN, W2RMM were in a QSO early one morning on 75. Who should call in but NY4AB in Cuba. NY4AB said he heard the Moose Jaw station (5AR of course). Lee was running exactly 8 watts using a Mark 19 transmitter on 75 tons. If you fellows want to work a little 75 try lower your power.

5DB (the RI) is on 75 with a 18 set (from Regina). Tfe. —5MW—L. 73 Bill.

Ve6

W. R. Savage, Ve6EO, Lethbridge, Alta.—SMN put up a new clothes line for xyl but had to take it down to be able to work ds. 6EO cleans the dust out of his rig and has everything ready for the SS contest. 6TM erected a 10 meter workshop beam on top of a 60-ft. pole, now he has to climb up again to see why it doesn't rotate. 6AO builds a new mast; we wonder if this one will stay up. 6HQ puts up 10 meter 2 element and a 20 meter 2 element beam—but was not a success so it's down now. What's wrong in Calgary, everybody is beaming. 6XX is working on a 3 element beam. 6FK builds a 3 element 10 and 4 element 20 meter beam, but discarded the 10 so he could get the 20 up before the snow flies. He also has WAC on 20 meter tone and needs Africa to make it on CW. 6AY is travelling for T. P. & C., so watch out fellows he may drop in without warning. 6KL (better known as AH) complete with board, visited Calgary. 6TY miscalculated somewhere, his new mast is not high enough for his vertical antenna. 6HU has rebuilt his modulator to 807s and is going in for recorded CQs. 6PY is using an Rfer. 6CD has knocked over enough rare ones for his DXCC, but says cards are very slow coming in. Our sympathy is extended to you, Jim. 6HZ tried to get in on a round table but couldn't make the grade. Better put Maud on there. Glen, 6HP is having trouble with his lighting plant, but it didn't effect the nice 75 tone signal he puts out. 6YN would like to get a card same going on 75 tone round table. 6OT says when all the Calgary boys are on it pays to stay out of the Canadian fone band. 6VN is on 75 tone after cleaning out the moth ball storage during the summer. 6MA is going to put on 809 in his final in place of the 807. 6AA has a yard full of antennas, what with a beam and dipole. 6PP does some real point-to-point QSP work—th. Pete, 6PK really is sold on his AR-88 receiver. 6IT is active on 40 CW and putting out a nice signal. 6EA pays a visit to Lethbridge for remote broadcast of hockey game. 6HM has just returned from a visit to W1AW and WWV, better watch your frequencies now fellows. 6MJ is building a nifty indicator for his beam. 6PJ is active on 75 tone. 6OD falls asleep after supper and misses two of his favorite radio programs, not to mention what he missed on the 75 tone band. 6DN is writing for a

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WHAT IS IT?

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WHY IT'S THE SECOND ANNUAL BANQUET

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SEE NEXT ISSUE

speaker to match his receiver so he can open up the gain on it. 6LA did not get all his crop harvested so he has turned the cows in to finish the job. 6EB is building a converter so he can work 10 and 6 meters on his receiver. 6TK is busy on 75 and 20 meter fone. 6FS is sporting a new service truck for his refrigerator and radio work. 6OF is on 28 Mc fone now. 6KO is heard working on 80 meter CW. 6KA is also on 80 meter CW with an 813. 6LJ is on 28 Mc fone and getting out fine. 6OX is putting out a husky signal on 10 meter fone. 6EV is also on 10 fone and sporting a new National receiver. 6KN is a new call in Edmonton and is old 4AC from Winslow. Lots of luck with the new call, Bob.

is still working in Edmonton. The following is Ve-October report—6FO has now moved to Toronto after working all the dx he can from Lethbridge, lots of luck and dx Bill in your new Qth. 6IC is still plugging away at his new PP 51's. 6KO keeps loading up on War Assets equipment. When he gets it all into a rig he should get out. 6SZ has to QRT to fix the xyl radio set—we heard this on 20 meters. 6EL has 500 watts and can be heard on 20 meters in Lethbridge. That works out at five watts per mile from here. 6SR has finished his radio room and is now moving his equipment in. 6DN has a new receiver (BC348Q), lots of luck with reception. 6WL is heard on 15 meter fone. 6ZL still sticks to 75 meter CW but is planning phone rig. 6DU is a new Calgary call and had first QSO with 6JP. 6EK has QTH in Calgary now. 6AZ is sporting a new beam. 6AO is heard regularly in Calgary. He must have put an antenna on that power house. 6BC was seen recently on a visit to Calgary; must have been looking for a good receiver. 6AC is seen in Edmonton in connection with R.C.M.P.-FM job. 6OD has been working remote from tent on river bank; lots of sound effect including train whistles and passing cars. 6JP informs us that there is a 6TJ in Raymond and also that Harry Freeman has been holding this call but we note that the latest call book lists T. C. Jensen at Standard as the owner. We now would like to know who we three stations holding this call or who is the rightful owner. 6JR-6RM-6BC are all AGT employees, looks like we may have an AGT network in Alberta. 6BU seems to be getting out fine by the cards he has been receiving lately. 6EV is having an odd QSO when he is not working on his beam. 6TM has a mammoth pole (65 feet) for his beam. He probably will need two willing hams to assist him planting it. 6EO wins \$15.00 worth of radio tubes from the General Electric Co. 6MA is getting organized and we expect him to be on the air anytime now. 6MN is still working dx. He won't work locals because he always burns out his 866 fil. xfrm. 6VN is still racing with time to get his new house finished before the snow flies. 6OF now has his rig going on ten meters and is getting out O.K., even though his antenna is on the side of the house. 6HW is back in Lethbridge to relieve 6OF while he is on holidays. Thanks very much to the few fellows who sent in information this month.

Ve7

Ernie Savage, Ve7FB, 4553 12th Ave. West, Vancouver, B.C.—Yours truly just returned from the interior of B.C. after a visit with some of the gang. Plenty doing up there, much to my surprise. YET NO REPORTS from ANY OF THE CLUBS! 7AM is passing out signs celebrating arrival of a new junior op. Let's hope he has more hair than Bill! Bill at 7PJ was last heard talking up partnership for life. Good luck to you and Hilda kiddo! Suppose it's the last well-heeled traffic from Porpoise to Vancouver. 7PH and family calls Crescent Beach his new QTH. W4TZQ was found wandering around Victoria ham shacks. This column looks more like a social one! Ed and Susan at 7BJ hopped off to Seattle for a hitch with W7BQS, and KH6PN/W7 then went on to see 7CB and visited the gang at Victoria. JACW has been in Vancouver with his xyl, as has 7AJL and his family. 7EL, ex7AJQ, 7ZF have been around Vancouver lately. Pleased to report that 7MC, ex7AAN is home and on the mend again after operating for a long period from hospital bedside. Totem and Vancouver Radio Clubs covered the "Teen Town" Softball Series, otherwise known as "The Little World Softball Series." Games were played at two parks by teams from all over the province and so that the judges could be kept in constant touch, a VHF set-up was used. 75 meter fone was used to supply the outlying B.C. districts with total scores each evening. It was a splendid job with far too many helpers to congratulate individually. A swell plug in Vancouver papers called it "another triumph for amateur radio." Orchids from CAROA to Totem and V.A.R.C.). Spied in the "Gym Joint" was 7RS—yep, he's rebuilding 7GM sheds TUY at Telegraph Creek can be found on 40 and 80,

CW that is. 7ZA has been doing strange things in carpentry, we wonder! 7LK makes early morning trips to tend the furnace, says "I heard you on so I thought I'd give you a call." He's at it again for the second winter! Wonder what else is in that basement—inside glass, besides electrons an' stuff! How about a line from 7ADL out at Sandspit Q.C.? 7JF is heard with his usual collection of odd handles with a 83T VFO, 83T Buffer, and 803 final. 7BY is looking for some real competition in chess via radio. Any takers? 7eMI is heading back carrying a pack of 810's and 814's chassis and a lot of other gadgets. He and your faithful correspondent were taken in tow by 7SO and 7AHH for a round of elbow-bending exercises later visiting 7HW who hammed with us with a hammer in one hand a light in the other while he built his house. Someone wondered why the house was so big and after closer inspection one found that the basement was full of R-1155's!!! 7OJ the "voice of experience" is a grandfather! Nice going Marv! 7CN puts Prince George on the map with a BC-610 on 10-20-40 and 86. Several new hams coming on from "PG." The University of British Columbia are still looking for studs with other universities across Canada. The Five-O'clock Net is going strong on 8850 Kc and includes 7AAZ, 7ACF, 7ACW, 7AHH, 7ALJ, 7BJ (Net Control) 7BL, 7WBQS, 7BY, 7CB, 7CX, 7DE, 7DP, 7FB, KH6FM/WI, 7JF, 7JFB, 7LC, 7LK, 7MU, 7OQ, 7PO, 7P, 7RE, 7RV, 7SL, 7SF, 7SO, 7SW, 7UA, 7UF, 7US, 7WP, 7XE, 7XX, 7ZE. Should you wish to move traffic or ragchew break in on the gang at 8850. Official broadcasts are also heard from it. 7ARA the headquarters station of the British Columbia Amateur Radio Association will have commenced operating on 3250 Kc by the time you read this report. B.C. clubs and amateurs are urged to work their Association HQ Station 7eARA from 10:30 P.S.T. each night. By the way, awards are being offered for the fellers who move and fail to report so doing to their local RI—whether on or OFF the air! Now that winter is just around the corner most of the bays are rebuilding. AZ—Jack Sweeney's shack is shrouded with secrecy. He has the windows blacked out and doesn't answer the door. Could be a new blond, VFO, Applebox special or something! UU—Alf. Joliffe ran into lots of tough luck lately. Blew up HK54 Unal. Then the power section of new VFO went up in smoke, but Alf. managed to work his first VK with his buffer. There's a new bottle sitting on his shelf with so many figures on it I can't recall what it is. Alf. says it's just the thing to work dx with. AME—Dug. Gordon sporting a new call, six and antenna is on 40 CW now and is gradually getting over key fright. Look for a T8 sig around 7085 Kc. That's him. AGP—Another new call belongs to George Nuhn. He's on 40 CW, but is having a hard time convincing his mother that a ham has to stay up late to work dx on 40. KR—Is the most heard call on 40 CW. Jim was slow in getting on when the bands opened up but has been making up for lost time. He gets out FB through QRM with only a single 6L6. LF—Cliff Steele is going to work dx with lots of power. He's getting a rig together somewhere in the neighborhood of KW. He packed a lot of huge boxes into the shack and has also found out what the weights are for on the bag. XT—George Sexton putting out more RF by using a Pt of 811's and melting the plates on them. MH—Gord. Armstrong hasn't been heard on 20 CW lately—must be working on the 10 lone rig. He's run out of dx on 20. BE—Hal Olson, 40 CW is getting its share of QRM from Hal who is building up modulator and will be heard on all lone bands soon. OJ—Gord. Clarke has a fine new pole in his back yard, but it has to dry out for awhile. It's really massive and took half the club to load it into the truck for transportation. It's to be a 7 Me rotary so he says. A new rig is also in the making. VFO is XTAL control with soldered joints. AJP—E. Ackerman is back from his fishing and has his three element rotary down now, either for repairs or something new for the tower. It is always active on 10 meter lone. AJR—Spud Clarke is not back from honeymoon. VF—Hugh Cummings has lots of room to string antennas at his new QTH and should have a strong signal now. AKW—Don McDonnell is on 10 lone and likes it better than CW.

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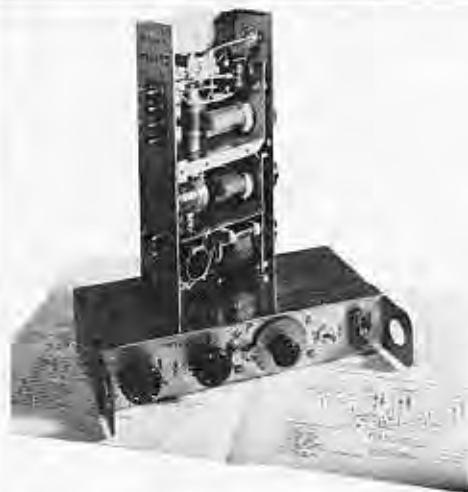
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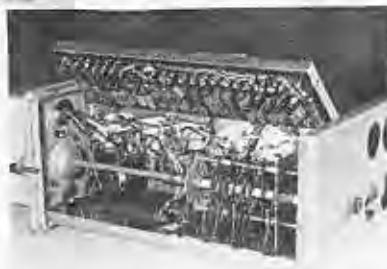
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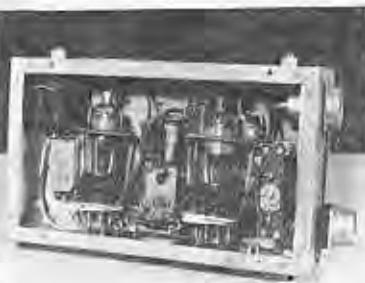
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Food for G's

Ontario Phone Net Takes Up The Call Under Able Supervision of Mrs. Nell Lloyd At Ve3DD

Following Bert Knowle's editorial in September issue of XTAL the Ontario Phone Net has been doing yeoman service for the cause. Mrs. Nell Lloyd, exYL of Ve3DD, has been doing the book work and arranging for shipment of parcels to the Old Country. The fund is increasing by the evening. Following is a list of donors as we go to press.

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Ham Whyte's editorial on page four gives further reasons for serious thought. The Ontario Phone Net is to be complimented on their fine response and initiative. They have evolved a plan whereby their BCL "listening audience" may now participate. OPN offer a QSL card for every donation! HQ hopes to be able to increase the flow with a plan which will appear in the January issue. Meantime, you may send donations or items as suggested in September's editorial to your CAROA HQ at 46 St. George street, Toronto. If you happen to live in Montreal, get in touch with Lin Morris, Ve2CO of the M.A.R.C. who will be pleased to assist you. The M.A.R.C. boys took up a collection in excess of Thirty Dollars at their last meeting. London's Amateur Radio Club is hard at work for the cause and collected Twenty-five Dollars at the pass of the hat!

FB fellows, CAROA is proud of your spirit.

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Q V E

A great number of reports have come direct to HQ from hams in the various districts. Where such reports concern activities, club doings, and general gossip, much time can be saved by the staff if such were sent to the District Representative for the district concerned. Following is a list of all correspondents who write district reports for CAROA NATIONAL REPORT each month. Remember that he must have them by the 7th of the month to meet his deadline by the 15th. Tnx.

Ve1

R. J. HEISLER, Ve1KS,
Box 160, Sackville, N.B.

Ve2

F. G. GRIBBEN, Ve2XR,
5120 Westbury Ave., Montreal P.Q.

Ve3

R. C. HUNT, Ve3WX
103 Garfield Ave., London, Ont.

Ve4

30 Atholl Apts., Winnipeg, Man.

Ve5

BILL GORDON, Ve5MW
Oxbow, Sask.

Ve6

W. R. SAVAGE, Ve6EO,
329 15th St. N., Lethbridge, Alta.

Ve7

ERNIE SAVAGE, Ve7FB,
4553 12th St. Ave. W.,
Vancouver, B.C.

Ve8

JACK SPALL, Ve8AS,
Box 268, Whitehorse, Y.T.

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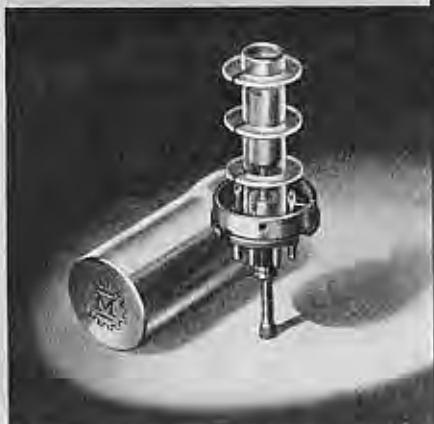


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